

Notice of Allowability

Application No.

10/706,489

Examiner

Aaron W. Carter

Applicant(s)

DUVDEVANI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephone interview on 11/7/07 and the papers filed on 10/19/07.
2. ☒ The allowed claim(s) is/are 1,9 and 17-34.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/633,756.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Clifford J. Mass (Reg. No. 30,086) on 11/7/07.

The application has been amended as follows, strikethrough indicates a deletion and underline indicates an addition:

Please amend claim 1 as follows:

1. An electrical circuitry inspection method comprising:

performing reference based inspection of electrical circuitry to be inspected,

including:

for each of a plurality of types of local characteristics, each type occurring at least once within said electrical circuitry to be inspected, identifying at least one portion of interest within the electrical circuitry whereat said local characteristic is expected to occur; and

inspecting an image of each of said at least one portion of interest, using a selected inspection task employing information defining said portion of interest and additional inspection information relevant to said portion of interest, said inspection task being selected

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from among a plurality of different inspection tasks in response to the type of local characteristic expected to occur in the portion of interest,

said information defining said portion of interest comprising at least one of:

binary Contour Element (CEL) data, identifying contour elements which correspond to borders between different regions in a pattern; and

color CEL data, identifying contour elements which correspond to borders between different regions in a pattern and identifying a type of region on either side of a CEL;

~~morphological feature inspection triggers; and~~

~~color defect inspection triggers.~~

Please amend claim 9 as follows:

9. Electrical circuitry apparatus comprising:

a reference based inspector performing reference based inspection of electrical circuitry to be inspected, said reference based inspector including:

a portion of interest identifier operative, for each of a plurality of types of local characteristics, each type occurring at least once within said electrical circuitry to be inspected, to identify at least one portion of interest within the electrical circuitry whereat said local characteristic is expected to occur; and

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an image inspector inspecting an image of each of said at least one portion of interest, using a selected inspection task employing information defining said portion of interest and additional inspection information relevant to said portion of interest, said inspection task being selected from among a plurality of different inspection tasks in response to the type of local characteristic expected to occur in the portion of interest,

said information defining said portion of interest comprising at least one of:

binary Contour Element (CEL) data, identifying contour elements which correspond to borders between different regions in a pattern; and

color CEL data, identifying contour elements which correspond to borders between different regions in a pattern and identifying a type of region on either side of a CEL;

~~morphological feature inspection triggers; and~~

~~color defect inspection triggers.~~

Please amend claim 17 as follows:

17. A method according to claim 1, wherein said information defining said portion of interest further comprises ~~at least one of:~~

~~said binary CEL data, identifying contour elements which correspond to borders between different regions in a pattern; and~~

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~~said color CEL data, identifying contour elements which correspond to borders
between different regions in a pattern and identifying a type of region on either side of a CEL.~~

morphological feature inspection triggers; and

color defect inspection triggers.

Please amend claim 18 as follows:

18. A method according to claim 17 1 and wherein said information defining said portion
of interest comprises said binary CEL data.

Please amend claim 21 as follows:

21. A method according to claim 17 1 and wherein said information defining said portion
of interest comprises said color CEL data.

Please amend claim 27 as follows:

27. Apparatus according to claim 9, wherein said information defining said portion of
interest further comprises ~~at least one of:~~

~~said binary CEL data, identifying contour elements which correspond to borders
between different regions in a pattern; and~~

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~~said color CEL data, identifying contour elements which correspond to borders
between different regions in a pattern and identifying a type of region on either side of a CEL.~~

morphological feature inspection triggers; and

color defect inspection triggers.

Please amend claim 28 as follows:

28. Apparatus according to claim 27 9 and wherein said information defining said portion of interest comprises said binary CEL data.

Please amend claim 31 as follows:

31. Apparatus according to claim 27 9 and wherein said information defining said portion of interest comprises said color CEL data.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/07 has been entered.

Allowable Subject Matter

2. Claims 1, 9 and 17-34 are allowed.

The following is an examiner's statement of reasons for allowance:

3. As to claims 1 and 9, none of the prior art teach or fairly suggests the limitations of "information defining said portion of interest comprising at least one of: binary Contour Element (CEL) data, identifying contour elements which correspond to borders between different regions in a pattern; and color CEL data, identifying contour elements which correspond to borders between different regions in a pattern and identifying a type of region on either side of a CEL", in combination with the other limitations of the claims. The prior art of Meisberger et al., already of record, discloses inspecting an image of each of at least one portion of interest, using a selected inspection task employing information defining said portion, see Fig. 1, element 54 and

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56, column 5, lines 5-11 and column 13, lines 25-50. However, the prior art of Meisberger et al. does not teach or fairly suggest the information defining said portion of interest comprising at least one of: binary Contour Element (CEL) data, identifying contour elements which correspond to borders between different regions in a pattern; and color CEL data, identifying contour elements which correspond to borders between different regions in a pattern and identifying a type of region on either side of a CEL, as disclosed in the limitations of claims 1 and 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445. The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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